

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

Claims 1-35. (Cancelled)

Claim 36. (Currently Amended) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle; and
a mirror;
said head comprising:
a molded thin external plastic shell;
a foam core, said foam anchoring and supporting said shell; and
a load diffuser extending laterally into and embedded in said foam core from said mount, wherein, in use, loads acting on said head are transmitted through said foam to said load diffuser.

Claim 37. (Previously Presented) The vehicle external mirror assembly according to claim 36, wherein said head is pivotable with respect to said mount.

Claim 38. (Previously Presented) The vehicle external mirror assembly according to claim 37, wherein the interior surface of said shell is rough to improve adhesion to said foam.

Claim 39. (Previously Presented) The vehicle external mirror assembly according to claim 37, wherein said mount has a pivot assembly receiving portion, a vehicle body abutment and connection portion, and a body, said body comprising:

a molded thin external plastic body shell; and
a second foam core, said second foam anchoring and supporting said body shell.

Claim 40. (Previously Presented) The vehicle external mirror assembly according to claim 36, wherein the stiffness of said diffuser reduces from adjacent said mount to the periphery of said diffuser.

Claim 41. (Currently Amended) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle; and
a mirror;
said head comprising:
a molded external plastic shell;
a foam core, said foam anchoring and supporting said shell; and
a load diffuser extending laterally into and embedded in said foam core from
said mount,
wherein, in use, loads acting on said head are transmitted through said foam
to said load diffuser.

Claim 42. (Previously Presented) The vehicle external mirror assembly
according to claim 41, wherein said head is pivotable with respect to said mount.

Claim 43. (Previously Presented) The vehicle external mirror assembly
according to claim 42, wherein the interior surface of said shell is rough to improve
adhesion to said foam.

Claim 44. (Previously Presented) The vehicle external mirror assembly
according to claim 42, where said mount has a pivot assembly receiving portion, a vehicle
body abutment and connection portion, and a body, said body comprising:
a molded thin external plastic body shell; and
a second foam core, said second foam anchoring and supporting said body shell.

Claim 45. (Previously Presented) The vehicle external mirror assembly
according to claim 41, wherein the stiffness of said diffuser reduces from adjacent said
mount to the periphery of said diffuser.

Claim 46. (Currently Amended) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle; and
a mirror;

said head comprising:

a front molded thin external plastic shell;

a rear molded thin external plastic shell meeting said front shell at a joint; and

a foam core, said foam bonding said front and rear shells so that said foam will anchor and support ~~anchoring and supporting~~ said front and rear shells.

Claim 47. (Previously Presented) The vehicle external mirror assembly according to claim 46, wherein said joint is an overlapping joint.

Claim 48. (Previously Presented) The vehicle external mirror assembly according to claim 47, wherein said overlapping joint is formed from a projection, extending from the edge of one of the front or rear shells, received within a groove within the edge of the other one of said front or rear shells.

Claim 49. (Previously Presented) The vehicle external mirror assembly according to claim 46, wherein said joint is a butt joint.

Claim 50. (Previously Presented) The vehicle external mirror assembly according to claim 49, further comprising a hidden internal chamber formed between edges of said front and rear shells for preventing foam from escaping to the exterior of said shells.

Claim 51. (Previously Presented) The vehicle external mirror assembly according to claim 50, wherein at least one of said front and rear shells terminates in parallel double edges to provide a double butt joint against the other of said front and rear shells, thereby forming said hidden internal chamber.

Claim 52. (Previously Presented) The vehicle external mirror assembly according to claim 48, further comprising a load diffuser extending laterally into said foam core from said mount,

wherein, in use, loads acting on said head are transmitted through said foam to said load diffuser.

Claim 53. (Previously Presented) The vehicle external mirror assembly according to claim 52, wherein said head is pivotable with respect to said mount.

Claim 54. (Previously Presented) The vehicle external mirror assembly according to claim 53, wherein the interior surface of both said front and rear shells is rough to improve adhesion to said foam.

Claim 55. (Previously Presented) The vehicle external mirror assembly according to claim 54, where said mount has a pivot assembly receiving portion, a vehicle body abutment and connection port, and a body, said body comprising:

- a molded thin external plastic body shell; and
- a second foam core, said second foam anchoring and supporting said body shell.

Claim 56. (Previously Presented) The vehicle external mirror assembly according to claim 55, wherein the stiffness of said diffuser reduces from adjacent said mount to its periphery.

Claim 57. (Currently Amended) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle; and
a mirror;
said head comprising:
a front thin external plastic shell;
a rear thin external plastic shell; and
a foam core, the foam bonds said front and rear thin external plastic shells so that said foam will anchor and support said front and rear thin external plastic shells anchoring and supporting the shell.

Claim 58. (Previously Presented) A vehicle external mirror assembly comprising:

- a head;
- a mount for attaching said head to a vehicle; and
- a mirror;
- said head comprising:
 - a front thin external plastic shell;
 - a rear thin external plastic shell;

a foam core, the foam anchoring and supporting the shell; and
a porous foam gasket sandwiched between edges of said front and rear shells.

Claim 59. (Previously Presented) The vehicle external mirror assembly according to claim 58, further comprising a load diffuser extending laterally into said foam core from said mount,

wherein, in use, loads acting on said head are transmitted through said foam to said load diffuser.

Claim 60. (Previously Presented) The vehicle external mirror assembly according to claim 59, wherein said housing is pivotable with respect to said mount.

Claim 61. (Previously Presented) The vehicle external mirror assembly according to claim 60, wherein the interior surface of both said front and rear shells is rough to improve adhesion to said foam.

Claim 62. (Previously Presented) The vehicle external mirror assembly according to claim 59, where said mount has a pivot assembly receiving portion, a vehicle body abutment and connection portion, and a body, said body comprising:

a molded thin external plastic body shell; and
a second foam core, said second foam anchoring and supporting said body shell.

Claim 63. (Previously Presented) The vehicle external mirror assembly according to claim 59, wherein the stiffness of said diffuser is reduced as said diffuser extends away from said mount.

Claim 64. (Previously Presented) A method for manufacturing a vehicle external mirror housing, for housing a rear vision mirror, comprising the steps of:

molding a first thin plastic component for use as a front shell;
molding a second thin plastic component for use as a rear shell;
positioning and retaining said first and second shells against each other in an edge-to-edge relationship so as to create an internal void; and

substantially filling said void with foam to form a rigid assembly bonded together by said foam.

Claim 65. (Previously Presented) A method for manufacturing a vehicle external mirror housing, for housing a rear vision mirror, comprising the steps of:

molding a first thin plastic component for use as a front shell, wherein injection compression molding is used to mold first thin plastic component;

molding a second thin plastic component for use as a rear shell, wherein injection compression molding the compression molding is used to mold said second thin plastic component;

positioning and retaining said first and second shells against each other in an edge-to-edge relationship so as to create an internal void; and

substantially filling said void with foam to form a rigid assembly bonded together by said foam.

Claim 66. (Previously Presented) The method according to claim 65, further comprising a sub-step of sandwiching a porous foam gasket between the edges of said first and second shells, whereby said gasket allows the escape of air but not foam from said void.

Claim 67. (Previously Presented) The method according to claim 66, wherein said second thin plastic component includes an aperture for receiving a motor mechanism assembly, further comprising the step of positioning said motor mechanism assembly over said aperture and wherein said foam bonds said motor mechanism assembly in position.

Claim 68. (Previously Presented) A method for manufacturing a vehicle external mirror housing, for housing a rear vision mirror, comprising the steps of:

molding a pre-form component;

blow molding said pre-form component into a component having the external shape of a said mirror housing;

substantially filling said blow molded component with foam to form a rigid assembly.

Claim 69. (Previously Presented) A method for manufacturing a vehicle external mirror housing, for housing a rear vision mirror, comprising the steps of:

molding a first thin plastic component for use as a front shell;
gas assist injection molding a second thin plastic component for use as a rear shell;
positioning and retaining said first and second shells against each other in an edge-to-edge relationship so as to create an internal void; and
substantially filling said void with foam to form a rigid assembly bonded together by said foam.

Claim 70. (Previously Presented) The method according to claim 69, wherein injection compression molding is used to mold both of said front and rear thin plastic components.

Claim 71. (Previously Presented) A vehicle external mirror assembly comprising:

- a head;
- a mount for attaching said head to a vehicle; and
- a mirror;

said head comprising:

- a front molded thin plastic shell;
- a rear molded thin external plastic shell meeting said front shell at a butt joint;
- a foam core, said foam anchoring and supporting said front and rear shells;

and

a hidden internal chamber formed between edges of said front and rear shells for preventing foam from escaping to the exterior of said shells.

Claim 72. (Previously Presented) The vehicle external mirror assembly according to claim 71, wherein at least one of said front and rear shells terminates in parallel double edges to provide a double butt joint against the other of said front and rear shells, thereby forming a hidden internal chamber.

Claim 73. (Currently Amended) A vehicle external mirror assembly comprising:

- a head;
- a mount for attaching said head to a vehicle; and
- a mirror;

said head comprising:

a front molded thin external plastic shell;

a rear molded thin external plastic shell meeting said front shell at an overlapping joint formed from a projection, extending from the edge of one of the front or rear shells, received within a groove within the edge of the other one of said front or rear shells;

a foam core, said foam anchoring and supporting said front and rear shells;

and

a load diffuser extending laterally into and embedded in said foam core from said mount, wherein, in use, loads acting on said head are transmitted through said foam to said load diffuser.

Claim 74. (Previously Presented) The vehicle external mirror assembly according to claim 73, wherein said head is pivotable with respect to said mount.

Claim 75. (Previously Presented) The vehicle external mirror assembly according to claim 74, wherein the internal surface of both said front and rear shells is rough to improve adhesion to said foam.

Claim 76. (Previously Presented) The vehicle external mirror assembly according to claim 75, wherein said mount has a pivot assembly receiving portion, a vehicle body abutment and connection port, and a body, said body comprising:

a molded thin external plastic body shell; and

a second foam core, said second foam anchoring and supporting said body shell.

Claim 77. (Previously Presented) The vehicle external mirror assembly according to claim 76, wherein the stiffness of said diffuser reduces from adjacent said mount to its periphery.

Claim 78. (Previously Presented) A vehicle external mirror assembly comprising:

a head;

a mount for attaching said head to a vehicle; and

a mirror;

said head comprising:

a front thin external plastic shell;
a rear thin external plastic shell;
a foam core, the foam anchoring and supporting the shell; and
a porous foam gasket sandwiched between edges of said front and rear shells.

Claim 79. (Previously Presented) The vehicle external mirror assembly according to claim 78, further comprising a load diffuser extending laterally into said foam core from said mount,

wherein, in use, loads acting on said head are transmitted through said foam to said load diffuser.

Claim 80. (Previously Presented) The vehicle external mirror assembly according to claim 79, wherein said housing is pivotable with respect to said mount.

Claim 81. (Previously Presented) The vehicle external mirror assembly according to claim 80, wherein the interior surface of both said front and rear shells is rough to improve adhesion to said foam.

Claim 82. (Previously Presented) The vehicle external mirror assembly according to claim 79, where said mount has a pivot assembly receiving portion, a vehicle body abutment and connection portion, and a body, said body comprising:

a molded thin external plastic body shell; and
a second foam core, said second foam anchoring and supporting said body shell.

Claim 83. (Previously Presented) The vehicle external mirror assembly according to claim 79, wherein the stiffness of said diffuser reduces as it extends away from said mount.

Claim 84. (Currently Amended) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle;
a mirror;
said head comprising:

a front molded thin external plastic shell;
a rear molded thin external plastic shell meeting said front shell at a butt joint;
a foam core, said foam bonds said front and rear thin external plastic shell so that said foam anchors and supports ~~anchoring and supporting~~ said front and rear thin external plastic shells; and
a hidden internal chamber formed between edges of said front and rear shells for preventing foam from escaping to the exterior of said shell.

Claim 85. (Previously Presented) The vehicle external mirror assembly according to claim 84, wherein at least one of said front and rear shell terminates in parallel double edges to provide a double butt joint against the other of said front and rear shells, thereby forming said hidden internal chamber.

Claim 86. (New) A vehicle external mirror assembly comprising:
a head;
a mount for attaching said head to a vehicle;
a mirror;
said head comprising:
a front molded thin external plastic shell;
a rear molded thin external plastic shell, wherein said at least one of said front and rear shells terminates in parallel double edges to provide a double butt joint against the other of said front and rear shells, thereby forming said hidden internal chamber;
a foam core, said foam core anchoring and supporting said front and rear shells; and
a hidden internal chamber formed between edges of said front and rear shells for preventing foam from escaping to the exterior of said shell.